FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Air Liquide Large Industries U.S. LP

AUTHORIZING THE OPERATION OF
La Porte ASU and SMR Plant
Industrial Gases

LOCATED AT
Harris County, Texas
Latitude 28° 38' 48" Longitude 95° 3' 21"
Regulated Entity Number: RN105147433

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O3982 Issuance Date: _____

_____
For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

    A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

    B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

    C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

    D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. Emission units subject to 40 CFR Part 63, Subpart ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.

F. The permit holder shall comply with the following 30 TAC Chapter 101, Subchapter H, Division 3 (Mass Emission Cap and Trade Program) Requirements:

(i) Title 30 TAC § 101.352 (relating to General Provisions)

(ii) Title 30 TAC § 101.353 (relating to Allocation of Allowances)

(iii) Title 30 TAC § 101.354 (relating to Allowance Deductions)

(iv) Title 30 TAC § 101.356 (relating to Allowance Banking and Trading)

(v) Title 30 TAC § 101.358 (relating to Emission Monitoring and Compliance Demonstration)

(vi) Title 30 TAC § 101.359 (relating to Reporting)

(vii) Title 30 TAC § 101.360 (relating to Level of Activity Certification)

(viii) The terms and conditions by which the emission limits are established to meet or exceed the cap are applicable requirements of this permit

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1 , shall not exceed 20% opacity averaged over a six-minute period. The permit holder shall comply with the following requirements for stationary vents at the site subject to this standard:

(i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(1)(E)

(iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)

(iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the "Applicable Requirements Summary" attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:

(1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.

(2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.

(3) Records of all observations shall be maintained.

(4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the

emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

(c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

C. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

4. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

   A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

   B. Title 40 CFR § 60.8 (relating to Performance Tests)

   C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

   D. Title 40 CFR § 60.12 (relating to Circumvention)

   E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

   F. Title 40 CFR § 60.14 (relating to Modification)

   G. Title 40 CFR § 60.15 (relating to Reconstruction)

   H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

5. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

New Source Review Authorization Requirements

6. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

   A. Are incorporated by reference into this permit as applicable requirements

   B. Shall be located with this operating permit

   C. Are not eligible for a permit shield

7. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

8. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

Compliance Requirements

9. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

10. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:

    A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:

        (i) For sources in the Houston-Galveston-Brazoria Nonattainment area, 30 TAC § 117.9020:

            (1) Title 30 TAC § 117.9020(2)(A), (C), and (D)

    B. The permit holder shall comply with the requirements of 30 TAC § 117.354 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.356 for Revision of Final Control Plan.

11. Use of Emission Credits to comply with applicable requirements:

    A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:

        (i) Title 30 TAC Chapter 115

        (ii) Title 30 TAC Chapter 117

        (iii) Offsets for Title 30 TAC Chapter 116

    B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:

        (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)-(d)

        (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1

        (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)-(d)

        (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122

        (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)

12. Use of Discrete Emission Credits to comply with the applicable requirements:

A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

(i) Title 30 TAC Chapter 115

(ii) Title 30 TAC Chapter 117

(iii) If applicable, offsets for Title 30 TAC Chapter 116

(iv) Temporarily exceed state NSR permit allowables

B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

(i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

(ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

(iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

(iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

(v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Risk Management Plan

13. For processes subject to 40 CFR Part 68 and specified in 40 CFR § 68.10, the permit holder shall comply with the requirements of the Accidental Release Prevention Provisions in 40 CFR Part 68. The permit holder shall submit to the appropriate agency either a compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR § 68.10(a), or as part of the compliance certification submitted under this permit, a certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of a risk management plan.

Permit Location

14. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Permit Shield (30 TAC § 122.148)

15. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit

shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Attachments

Applicable Requirements Summary

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
ASU DEG-2	SRIC ENGINES	N/A	R7310-GEN2	30 TAC Chapter 117, Subchapter B	No changing attributes.
ASU DEG-2	SRIC ENGINES	N/A	63ZZZZ-GEN2	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
ASUDTK1FIL	LOADING/UNLOADING OPERATIONS	N/A	R5211-ULOAD	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
ASUOWSEP	VOLATILE ORGANIC COMPOUND WATER SEPARATORS	N/A	R5132-SEP	30 TAC Chapter 115, Water Separation	No changing attributes.
ASURGNHTR	PROCESS HEATERS/FURNACES	N/A	R7310-HTR	30 TAC Chapter 117, Subchapter B	No changing attributes.
BDVENT	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
DAVENT1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
DAVENT2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
FLARE	FLARES	N/A	R1101-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GLYCOLTNK	LOADING/UNLOADING OPERATIONS	N/A	R5211-01	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
SMR DEG-1	SRIC ENGINES	N/A	R7310-GEN1	30 TAC Chapter 117, Subchapter B	No changing attributes.
SMR DEG-1	SRIC ENGINES	N/A	60IIII-GEN1	40 CFR Part 60, Subpart IIII	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
SMR DEG-1	SRIC ENGINES	N/A	63ZZZZ-GEN1	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
SMRDFWP	SRIC ENGINES	N/A	R7310-FWP	30 TAC Chapter 117, Subchapter B	No changing attributes.
SMRDFWP	SRIC ENGINES	N/A	60IIII-FWP	40 CFR Part 60, Subpart IIII	No changing attributes.
SMRDFWP	SRIC ENGINES	N/A	63ZZZZ-FWP	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
SMRDTK1FIL	LOADING/UNLOADING OPERATIONS	N/A	R5211-ULOAD	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
SMRDTK2FIL	LOADING/UNLOADING OPERATIONS	N/A	R5211-ULOAD	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
SMRSTACK	PROCESS HEATERS/FURNACES	N/A	R7300-01	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas
SMRSTACK	PROCESS HEATERS/FURNACES	N/A	R7300-02	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Gaseous fuel other than natural gas, landfill gas, or renewable non-fossil fuel gases.
SMRSTACK	PROCESS HEATERS/FURNACES	N/A	R7300-03	30 TAC Chapter 117, Subchapter B	Fuel Type #1 = Natural gas, Fuel Type #2 = Gaseous fuel other than natural gas, landfill gas or renewable non-fossil fuel gases
STMVNT1	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.
STMVNT2	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	R5121-01	30 TAC Chapter 115, Vent Gas Controls	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
ASU DEG-2	EU	R7310-GEN2	Exempt	30 TAC Chapter 117, Subchapter B	§ 117.303(a)(6)(D) [G]§ 117.310(f)	Units exempted from the provisions of this division, except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1), and 117.354(a)(5), include stationary gas turbines and stationary internal combustion engines that are used exclusively in emergency situations, except that operation for testing or maintenance purposes is allowed for up to 52 hours per year, based on a rolling 12-month average.	None	§ 117.340(j) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
ASU DEG-2	EU	63ZZZZ-GEN2	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6603(a)-Table2d.4 § 63.6595(a)(1) § 63.6605(a) § 63.6605(b) § 63.6625(e) § 63.6625(h) § 63.6625(i) § 63.6640(f)(1) § 63.6640(f)(2) § 63.6640(f)(2)(i) § 63.6640(f)(4) § 63.6640(f)(4)(i)	For each existing emergency stationary CI RICE and black start stationary CI RICE, located at an area source, you must comply with the requirements as specified in Table 2d.4.a-c.	§ 63.6625(f) § 63.6625(i) § 63.6640(a) § 63.6640(a)-Table6.9.a.i § 63.6640(a)-Table6.9.a.ii	§ 63.6625(i) § 63.6655(d) § 63.6655(e) § 63.6655(f) § 63.6660(a) § 63.6660(b) § 63.6660(c)	§ 63.6640(e) § 63.6650(f)
ASUDTK1FIL	EU	R5211-ULOAD	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this division, except as specified.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
ASUOWSEP	EU	R5132-SEP	VOC	30 TAC Chapter 115, Water Separation	§ 115.137(a)(2) [G]§ 115.132(a)(4)	Any single or multiple compartment VOC water separator which separates materials having a true vapor pressure of VOC < .5 psia obtained from any equipment is exempt from §115.132(a).	[G]§ 115.135(a) § 115.136(a)(1) § 115.136(a)(3) § 115.136(a)(4)	§ 115.136(a)(1) § 115.136(a)(3) § 115.136(a)(4)	None
ASURGNHTR	EU	R7310-HTR	NO_X	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(ii) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(2)(C) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.340(p)(2)(A) § 117.340(p)(2)(B) § 117.340(p)(2)(C) § 117.8000(b) § 117.8000(c) § 117.8000(c)(1) § 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) § 117.340(p)(2)(D) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
ASURGNHTR	EU	R7310-HTR	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(B) § 117.310(c)(3)	CO emissions must not exceed 400 ppmv at 3.0% O 2, dry basis.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a) § 117.8000(b) § 117.8000(c) § 117.8000(c)(2)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8120 § 117.8120(2) [G]§ 117.8120(2)(A) § 117.8120(2)(B)		§ 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8)
BDVENT	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
DAVENT1	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
DAVENT2	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(B) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream specified in §115.121(a)(1) of this title with a concentration of VOC less than 612 parts per million by volume (ppmv) is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2) § 115.126(3)(C)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(C)	None
FLARE	CD	R1101-1	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for upset emissions as provided in	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						§101.222(b).			
GLYCOLTNK	EU	R5211-01	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this division, except as specified.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
SMR DEG-1	EU	R7310-GEN1	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and 117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)	None	§ 117.340(j) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None
SMR DEG-1	EU	60IIII-GEN1	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) § 60.4211(c) [G]§ 60.4211(f) § 60.4211(g) § 60.4211(g)(3) § 60.4218 § 89.112(a)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year	§ 60.4209(a) § 60.4211(g)(3) [G]§ 60.4212	§ 60.4211(g)(3) § 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						and later must comply with a CO emission limit of 3.5 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).			
SMR DEG-1	EU	60IIII-GEN1	NMHC and NO_X	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) § 60.4211(c) [G]§ 60.4211(f) § 60.4211(g) § 60.4211(g)(3) § 60.4218 § 89.112(a)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 75 KW and less than or equal to 560 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with an NMHC+NOx emission limit of 4.0 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).	§ 60.4209(a) § 60.4211(g)(3) [G]§ 60.4212	§ 60.4211(g)(3) § 60.4214(b)	[G]§ 60.4214(d)
SMR DEG-1	EU	60IIII-GEN1	PM (Opacity)	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) § 60.4211(c) [G]§ 60.4211(f) § 60.4211(g) § 60.4211(g)(3) § 60.4218 § 89.113(a)(1) § 89.113(a)(2) § 89.113(a)(3)	Emergency stationary CI ICE, that are not fire pump engines, with displacement < 10 lpc and not constant-speed engines, with max engine power < 2237 KW and a 2007 model year and later or max engine power > 2237 KW and a 2011 model year and later, must comply with following opacity emission limits: 20% during acceleration, 15% during lugging, 50% during peaks in either acceleration or lugging modes as stated in §60.4202(a)(1)-(2), (b)(2) and §89.113(a)(1)-(3) and	§ 60.4209(a) § 60.4211(g)(3) [G]§ 60.4212	§ 60.4211(g)(3) § 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						§1039.105(b)(1)-(3).			
SMR DEG-1	EU	60IIII-GEN1	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(b) § 60.4202(a)(2) § 60.4206 § 60.4207(b) § 60.4211(c) [G]§ 60.4211(f) § 60.4211(g) § 60.4211(g)(3) § 60.4218 § 89.112(a)	Owners and operators of emergency stationary CI ICE, that are not fire pump engines, with a maximum engine power greater than or equal to 130 KW and less than or equal to 2237 KW and a displacement of less than 10 liters per cylinder and is a 2007 model year and later must comply with a PM emission limit of 0.20 g/KW-hr, as stated in 40 CFR 60.4202(a)(2) and 40 CFR 89.112(a).	§ 60.4209(a) § 60.4211(g)(3) [G]§ 60.4212	§ 60.4211(g)(3) § 60.4214(b)	[G]§ 60.4214(d)
SMR DEG-1	EU	63ZZZZ-GEN1	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.	None	None	None
SMRDFWP	EU	R7310-FWP	Exempt	30 TAC Chapter 117, Subchapter B	[G]§ 117.303(a)(11) [G]§ 117.310(f)	Units exempted from the provisions of this division except as specified in §§117.310(f), 117.340(j), 117.345(f)(6) and (10), 117.350(c)(1) and	None	§ 117.340(j) [G]§ 117.345(f)(10) [G]§ 117.345(f)(6)	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						117.354(a)(5) include new, modified, reconstructed, or relocated stationary diesel engine placed into service on or after October 1, 2001, that operates less than 100 hours per year, based on a rolling 12-month average, in other than emergency situations; and meets the requirements for non-road engines as specified. §117.303(a)(11)(A)-(B)			
SMRDFWP	EU	60IIII-FWP	CO	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4-fn3 § 60.4206 § 60.4207(b) § 60.4211(c) [G]§ 60.4211(f) § 60.4211(g) § 60.4211(g)(2) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW but less than 450 KW and a displacement of less than 30 liters per cylinder and is a 2009-2011 model year and has a rated speed of greater than 2650 RPMs may comply with the emission limitations for the 2008 model year. In that event, the owners and operators must comply with a CO emission limit of 3.5 g/KW-hr as listed in Table 4 (Footnote 3) to this subpart.	§ 60.4209(a) § 60.4211(g)(2) [G]§ 60.4212	§ 60.4211(g)(2) § 60.4214(b)	[G]§ 60.4214(d)
SMRDFWP	EU	60IIII-FWP	NMHC and NO_X	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4-fn3 § 60.4206 § 60.4207(b) § 60.4211(c) [G]§ 60.4211(f)	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW but less than 450 KW	§ 60.4209(a) § 60.4211(g)(2) [G]§ 60.4212	§ 60.4211(g)(2) § 60.4214(b)	[G]§ 60.4214(d)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.4211(g) § 60.4211(g)(2) § 60.4218	and a displacement of less than 30 liters per cylinder and is a 2009-2011 model year and has a rated speed of greater than 2650 RPMs may comply with the emission limitations for the 2008 model year. In that event, the owners and operators must comply with an NMHC+NOx emission limit of 10.5 g/KW-hr as listed in Table 4 (Footnote 3) to this subpart.			
SMRDFWP	EU	60IIII-FWP	PM	40 CFR Part 60, Subpart IIII	§ 60.4205(c)-Table 4-fn3 § 60.4206 § 60.4207(b) § 60.4211(c) [G]§ 60.4211(f) § 60.4211(g) § 60.4211(g)(2) § 60.4218	Owners and operators of emergency stationary fire pump CI ICE with a maximum engine power greater than or equal to 130 KW but less than 450 KW and a displacement of less than 30 liters per cylinder and is a 2009-2011 model year and has a rated speed of greater than 2650 RPMs may comply with the emission limitations for the 2008 model year. In that event, the owners and operators must comply with a PM emission limit of 0.54 g/KW-hr as listed in Table 4 (Footnote 3) to this subpart.	§ 60.4209(a) § 60.4211(g)(2) [G]§ 60.4212	§ 60.4211(g)(2) § 60.4214(b)	[G]§ 60.4214(d)
SMRDFWP	EU	63ZZZZ-FWP	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						(7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.			
SMRDTK1FIL	EU	R5211-ULOAD	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this division, except as specified.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
SMRDTK2FIL	EU	R5211-ULOAD	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this division, except as specified.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
SMRSTACK	EU	R7300-01	NO_X	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(g) § 117.340(a) § 117.340(b)(1) § 117.340(b)(3) § 117.340(c)(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(p)(3)	generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
SMRSTACK	EU	R7300-01	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(B) § 117.340(f)(1)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(b)(1) § 117.340(b)(3) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)		[G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
SMRSTACK	EU	R7300-02	NO_x	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101, Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(g) § 117.340(a) § 117.340(b)(1) § 117.340(b)(3) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							[G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		
SMRSTACK	EU	R7300-02	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(B) § 117.340(f)(1)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(b)(1) § 117.340(b)(3) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
SMRSTACK	EU	R7300-03	NO_X	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) § 117.310(a)(8)(A)(i) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) § 117.340(f)(1)	An owner or operator may not use the alternative methods specified in §§ 117.315, 117.323 and 117.9800 to comply with the NO_x emission specifications but shall use the mass emissions cap and trade program in Chapter 101,	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(f) § 117.335(g) § 117.340(a) § 117.340(b)(1)	§ 117.345(a) § 117.345(f) § 117.345(f)(1) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(3) § 117.8010 [G]§ 117.8010(1) § 117.8010(2)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(3)	Subchapter H, Division 3, except that electric generating facilities must also comply with the daily and 30-day system cap emission limitations of § 117.320. An owner or operator may use the alternative methods specified in § 117.9800 to comply with § 117.320.	§ 117.340(b)(3) § 117.340(c)(1) [G]§ 117.340(c)(3) [G]§ 117.340(f)(2) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(i) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C) § 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6)		§ 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
SMRSTACK	EU	R7300-03	NH_3	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(2) § 117.310(c)(2)(B) § 117.340(f)(1)	For process heaters that inject urea or ammonia into the exhaust stream for NO_x control, ammonia emissions must not exceed 10 ppmv at 3.0% O_2, dry.	§ 117.335(a)(2) § 117.335(a)(4) § 117.335(b) § 117.335(c) § 117.335(d) § 117.335(g) § 117.340(b)(1) § 117.340(b)(3) § 117.340(d) [G]§ 117.340(f)(2) § 117.8100(a) § 117.8100(a)(1) § 117.8100(a)(1)(A) § 117.8100(a)(1)(B) § 117.8100(a)(1)(B)(ii) § 117.8100(a)(1)(C)	§ 117.345(a) § 117.345(f) § 117.345(f)(11) [G]§ 117.345(f)(2) § 117.345(f)(8) § 117.345(f)(9) § 117.8100(a)(5)(C)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.345(d) § 117.345(d)(2) § 117.345(d)(3) § 117.345(d)(4) § 117.345(d)(5) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4)

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
							§ 117.8100(a)(2) [G]§ 117.8100(a)(3) § 117.8100(a)(4) § 117.8100(a)(5) § 117.8100(a)(5)(A) § 117.8100(a)(5)(B) [G]§ 117.8100(a)(5)(D) [G]§ 117.8100(a)(5)(E) § 117.8100(a)(6) § 117.8130 § 117.8130(4)		[G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7) [G]§ 117.8010(8) § 117.8100(c)
STMVNT1	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None
STMVNT2	EP	R5121-01	VOC	30 TAC Chapter 115, Vent Gas Controls	§ 115.127(a)(2)(A) [G]§ 115.122(a)(4) § 115.127(a)(2)	A vent gas stream having a combined weight of volatile organic compounds (VOC) equal to or less than 100 pounds in any continuous 24-hour period is exempt from §115.121(a)(1) of this title.	[G]§ 115.125 § 115.126(2) § 115.126(3)(B)	§ 115.126 § 115.126(2) § 115.126(3) § 115.126(3)(B)	None

Permit Shield

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
ASUBLCHTK1	N/A	30 TAC Chapter 115, Storage of VOCs	This storage vessel does not store volatile organic compounds.
ASUBLCHTK1	N/A	40 CFR Part 60, Subpart Ka	This storage vessel does not store petroleum liquids.
ASUBLCHTK1	N/A	40 CFR Part 60, Subpart Kb	This storage vessel does not store volatile organic liquids.
ASUCT	N/A	30 TAC Chapter 115, HRVOC Cooling Towers	The cooling tower is associated with an air separation unit that does not process VOCs; therefore, there is no potential for HRVOC emissions.
ASUCT	N/A	40 CFR Part 63, Subpart Q	The cooling tower is not operated with chromium-based water treatment chemicals.
ASUDSLTK1	N/A	30 TAC Chapter 115, Storage of VOCs	This storage vessel has a capacity less than 1,000 gallons.
ASUDSLTK1	N/A	40 CFR Part 60, Subpart Ka	This storage vessel has a capacity less than 40,000 gallons.
ASUDSLTK1	N/A	40 CFR Part 60, Subpart Kb	This storage vessel was constructed prior to July 23, 1984.
ASUHYDXTK1	N/A	30 TAC Chapter 115, Storage of VOCs	This storage vessel does not store volatile organic compounds.
ASUHYDXTK1	N/A	40 CFR Part 60, Subpart Ka	This storage vessel does not store petroleum liquids.
ASUHYDXTK1	N/A	40 CFR Part 60, Subpart Kb	This storage vessel does not store volatile organic liquids.
ASURGNHTR	N/A	30 TAC Chapter 111, Incineration	The regenerator heater is not an incinerator.
ASURGNHTR	N/A	40 CFR Part 60, Subpart Db	The regenerator heater is not a steam generating unit as defined in 40 CFR 60.41b.
CT	N/A	30 TAC Chapter 115, HRVOC Cooling Towers	The cooling tower does not emit and does not have the potential to emit any HRVOCs as defined in 115.10.
CT	N/A	40 CFR Part 63, Subpart Q	The cooling tower is not operated with chromium-based water treatment chemicals.
FLARE	N/A	40 CFR Part 63, Subpart A	Not required by a subpart under 40 CFR 63.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
FUG	N/A	30 TAC Chapter 115, HRVOC Fugitive Emissions	The facility is not a petroleum refinery; a synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process; or a natural gas/gasoline processing operation.
FUG	N/A	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	The facility is not a petroleum refinery; a synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process; or a natural gas/gasoline processing operation.
FUG	N/A	40 CFR Part 63, Subpart H	The fugitive components are not in organic hazardous air pollutant service.
FUG	N/A	40 CFR Part 63, Subpart I	The SMR process is not one of the designated processes subject to this regulation.
NH3FUG	N/A	30 TAC Chapter 115, HRVOC Fugitive Emissions	The facility is not a petroleum refinery; a synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process; or a natural gas/gasoline processing operation.
NH3FUG	N/A	30 TAC Chapter 115, Pet. Refinery & Petrochemicals	The facility is not a petroleum refinery; a synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process; or a natural gas/gasoline processing operation.
NH3FUG	N/A	40 CFR Part 63, Subpart H	The fugitive components are not in organic hazardous air pollutant service.
NH3FUG	N/A	40 CFR Part 63, Subpart I	The SMR process is not one of the designated processes subject to this regulation.
PROASU	N/A	40 CFR Part 60, Subpart VV	The air separation unit process is not associated with a SOCMI process unit as it does not produce any chemical listed in 40 CFR 60.489.
PROASU	N/A	40 CFR Part 60, Subpart VVa	The air separation unit process is not associated with a SOCMI process unit as it does not produce any chemical listed in 40 CFR 60.489.

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
SMRALL	N/A	40 CFR Part 63, Subpart VVVVVV	The SMR does not use as feedstock, generate as byproducts, or produce as products any of the hazardous air pollutants (HAP) listed in Table 1 of this subpart.
SMRDSLTK1	N/A	30 TAC Chapter 115, Storage of VOCs	This storage vessel has a capacity less than 1,000 gallons.
SMRDSLTK1	N/A	40 CFR Part 60, Subpart Kb	This storage vessel has a capacity less than 75 cubic meters.
SMRDSLTK2	N/A	30 TAC Chapter 115, Storage of VOCs	This storage vessel has a capacity less than 1,000 gallons.
SMRDSLTK2	N/A	40 CFR Part 60, Subpart Kb	This storage vessel has a capacity less than 75 cubic meters.

New Source Review Authorization References

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Nonattainment (NA) Permits	
NA Permit No.: N116	Issuance Date: 06/25/2012
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 87575	Issuance Date: 06/25/2012
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.372	Version No./Date: 09/04/2000
Number: 106.373	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
ASU DEG-2	174 HP DIESEL EMERGENCY ENGINE	106.511/09/04/2000
ASUBLCHTK1	ASU 500 GAL SODIUM HYPOCHLORITE STORATE TANK	106.472/09/04/2000
ASUCT	ASU COOLING TOWER	106.371/09/04/2000
ASUDSLTK1	ASU 500 GAL DIESEL STORAGE TANK	106.472/09/04/2000
ASUDTK1FIL	FILLING OF ASU 500 GAL DIESEL TANK	106.472/09/04/2000
ASUHYDXTK1	ASU 330 GAL HYDREX STORAGE TANK	106.472/09/04/2000
ASUOWSEP	ASU OILY WATER SEPARATION UNIT	106.532/09/04/2000
ASURGNHTR	ASU NITROGEN REGENERATOR HEATER	106.183/09/04/2000
BDVENT	STEAM SYSTEM BLOWDOWN VENT	87575, N116
CT	COOLING TOWER	87575, N116
DAVENT1	EXPORT STEAM DEAERATOR VENT	87575, N116
DAVENT2	PROCESS STEAM DEAERATOR VENT	87575, N116
FLARE	PROCESS FLARE	87575, N116
FUG	PROCESS FUGITIVE EMISSIONS	87575, N116
GLYCOLTNK	GLYCOL STORAGE TANK FILLING	87575, N116
NH3FUG	AMMONIA SYSTEM FUGITIVE EMISSIONS	87575, N116
PROASU	ASU PROCESS	106.372/09/04/2000
SMR DEG-1	469 HP DIESEL EMERGENCY ENGINE	106.511/09/04/2000
SMRALL	STEAM METHANE REFORMER PRICESS	87575, N116
SMRDFWP	216 HP DIESEL FIRE WATER PUMP	106.511/09/04/2000
SMRDSLTK1	SMR 750 GAL DIESEL STORAGE TANK	106.472/09/04/2000

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
SMRDSLTK2	SMR 300 GAL DIESEL STORAGE TANK	106.472/09/04/2000
SMRDTK1FIL	FILLING OF SMR 750 GAL DIESEL TANK	106.472/09/04/2000
SMRDTK2FIL	FILLING OF SMR 300 GAL DIESEL TANK	106.472/09/04/2000
SMRSTACK	REFORMER COMBUSTION STACK	87575, N116
STMVNT1	EXPORT STEAM VENT	87575, N116
STMVNT2	PROCESS STEAM VENT	87575, N116

Appendix A

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
CEMS ..... continuous emissions monitoring system
CFR ..... Code of Federal Regulations
COMS ..... continuous opacity monitoring system
CVS ..... closed vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MACT ..... Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr ..... Million British thermal units per hour
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NESHAP ..... National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PEMS ..... predictive emissions monitoring system
PM ..... particulate matter
ppmv ..... parts per million by volume
PRO ..... process unit
PSD ..... prevention of significant deterioration
psia ..... pounds per square inch absolute
SIP ..... state implementation plan
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table

Permit Numbers: 87575 & N116			Issuance Date: June 25, 2012				
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates ***		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY****	**Spec. Cond.**	**Spec. Cond.**	**Spec. Cond.**
SMRSTACK	Reformer Combustion Stack Normal Operations	NO_X	26.03	24.70	2, 4, 7, 10, 11, 12, 13, 14	2, 7, 11, 13, 14, 21, 22	11, 13
		CO	16.55	60.42			
		VOC	2.50	9.12			
		$PM_{2.5}$	7.81	28.50			
		SO_2	0.84	1.85			
		NH_3	5.04	18.39			
SMRSTACK	Reformer Combustion Stack MSS Activities	NO_X	152.09	8.55	2, 4, 7, 10, 11, 12, 13, 14	2, 7, 11, 13, 14, 20, 21, 22	11, 13
		CO	118.09	6.83			
		VOC	-	-			
		$PM_{2.5}$	-	-			
		SO_2	-	-			
		NH_3	10.64	0.59			
FLARE	Process Flare Normal Operations	NO_X	64.93	1.09	8	8, 21, 22	
		CO	0.13	0.56			
		SO_2	<0.01	<0.01			
		VOC	0.01	0.04			
		NH_3	0.49	<0.01			
FLARE	Process Flare MSS Activities	NO_X	95.13	3.40	8	8, 20, 21, 22	
		CO	532.21	12.62			
		SO_2	0.62	<0.01			
		VOC	6.98	0.02			
		NH_3	-	-			
DAVENT1	Export Steam Deaerator Vent Normal Operations	VOC	0.04	0.16		22	
		NH3	0.01	0.03			
DAVENT2	Process Steam Deaerator Vent MSS Activities	VOC	4.86	0.35		20, 22	
		NH3	0.26	0.02			
BDVENT	Steam System Blowdown Vent Normal Operations	VOC	9.00	2.59		22	
		NH3	0.01	<0.01			
BDVENT	Steam System Blowdown Vent MSS Activities	VOC	1.62	0.07		20, 22	
		NH3	<0.01	<0.01			

Permit Numbers: 87575 & N116			Issuance Date: June 25, 2012				
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates ***		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY****	**Spec. Cond.**	**Spec. Cond.**	**Spec. Cond.**
CT	Cooling Tower	VOC	0.01	0.07		22	
		PM10	0.44	1.93			
FUG	Process Fugitive Emissions (4)	CO	1.62	7.11		22	
		VOC	0.56	2.48			
NH3FUG	Ammonia System Fugitive Emissions	NH3	0.53	1.37	17	22	
GLYCOLTNK	Glycol Storage Tank	VOC	<0.01	<0.01			
BDSUMP	Steam System Blowdown Sump Normal Operations	VOC	0.46	2.03		22	
		NH3	0.05	0.23			
STMVNT1	Export Steam Vent MSS Activities	VOC	0.92	0.14		20, 22	
		NH3	0.17	0.02			
STMVNT2	Process Steam Vent MSS Activities	VOC	0.40	0.03		20, 22	
		NH3	0.08	0.01			

Footnotes:

(1) Emission point identification – either specific equipment or emission point number from a plot plan.

(2) Specific point source names. For fugitive sources use an area name or fugitive source name.

(3) NO_X – total oxides of nitrogen

CO – carbon monoxide

VOC – volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

PM – particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$

PM_{10} – particulate matter equal to or less than 10 microns in diameter. When PM is not listed, it is assumed that no PM greater than 10 microns is emitted.

PM2.5 – particulate matter equal to or less than 2.5 microns in diameter

SO2 – sulfur dioxide

NH3 – ammonia

(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 25, 2012

MR SCOTT SAVAGE
DIRECTOR HYDROGEN SYNGAS EAST
AIR LIQUIDE LARGE INDUSTRIES US LP
2700 POST OAK BLVD STE 1800
HOUSTON TX 77056-5797

Re: Permit Alteration
Permit Number: 87575
Hydrogen Production Facility
La Porte, Harris County
Regulated Entity Number: RN105147433
Customer Reference Number: CN600300693
Associated Permit Number: N116

Dear Mr. Savage:

This is in response to your letter received May 1, 2012, requesting alteration of the conditions of the above-referenced permit. We understand you wish to make changes to the Special Conditions to clarify the certification of the ammonia continuous emissions monitoring system and the initial start-up definition. In addition, you have requested to waive sulfur dioxide (SO_2) and particulate matter less than 10 microns in diameter (PM_{10}) from the initial compliance testing.

As indicated in Title 30 Texas Administrative Code § 116.116(c) [30 TAC § 116.116(c)], and based on our review, Permit Number 87575 is altered and your request to waive the initial compliance testing of SO_2 and PM_{10} has been approved. Enclosed are the altered permit conditions to replace those currently attached to your permit. Please attach these to your permit.

Planned maintenance, startup, and shutdown emissions have been previously reviewed, authorized, and included in the MAERT. Any other maintenance activities are not authorized by this permit and will need to obtain a separate authorization.

Your cooperation in this matter is appreciated. If you need further information or have any questions, please contact Ms. Katherine Stinchcomb at (512) 239-1583 or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Re: Permit Number: 87575

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality.

Sincerely,

Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/ks

Enclosure

cc: Director, Harris County, Pollution Control Services, Pasadena
Air Section Manager, Region 12 - Houston
Air Permits Section Chief, New Source Review, Section (6PD-R), U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 177304

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT

A PERMIT IS HEREBY ISSUED TO
Air Liquide Large Industries U.S. LP
AUTHORIZING THE CONSTRUCTION AND OPERATION OF
Hydrogen Production Facility
LOCATED AT **La Porte, Harris County, Texas**
LATITUDE 29° 39′ 10″ LONGITUDE 095° 03′ 43″

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code § 116.116 (30 TAC § 116.116)]

2. **Voiding of Permit**. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120(a), (b) and (c)]

3. **Construction Progress**. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]

4. **Start-up Notification**. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify to the Office of Permitting and Registration the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]

5. **Sampling Requirements**. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]

7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates**. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]

9. **Maintenance of Emission Control**. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with §§ 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]

10. **Compliance with Rules**. Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]

11. This permit may be appealed pursuant to 30 TAC § 50.139.

12. This permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]

13. There may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]

14. **Emissions** from this facility must not cause or contribute to a condition of "air pollution" as defined in TCAA § 382.003(3) or violate TCAA § 382.085, as codified in the Texas Health and Safety Code. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.

PERMITS 87575 and N116

Date: February 19, 2010

For the Commission

Special Conditions

Permit Numbers 87575 and N116

Emission Standards and Operating Specifications

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit based on the emission rate limits on that table and other operating requirements specified in this permit.

2. Fuel for the reformer combustion unit (Emission Point No. [EPN] SMRSTACK) shall be limited to pressure swing adsorption unit (PSA) off-gas, PSA feed gas or syngas, and pipeline-quality, sweet natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic foot (5 gr S/100 dscf) on a hourly basis and 1 gr S/100 dscf on an annual basis. Fuel for the flare pilots is limited to sweet natural gas. Use of any other fuel requires authorization from the Texas Commission on Environmental Quality (TCEQ).

   The following test methods shall be used regardless of whether the facilities would otherwise meet Title 40 Code of Federal Regulations (40 CFR) Part 60, Subpart GG. The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR § 60.335(b)(10). Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), the major sulfur compounds may be measured using the American Standard Test Method (ASTM) D4084–82, 94, D5504–01, D6228–98, or Gas Processors Association Standard 2377–86 (all of which are incorporated by reference in 40 CFR § 60.17).

   The sulfur content of the natural gas shall be documented by a sample taken and analyzed every quarter. The sample and analysis may be performed by the gas supplier. If all the samples taken during the first two years are less than 5 gr S/100 dscf, then the sampling period for sulfur content of the natural gas may be extended to an annual verification.

3. The steam methane reformer (SMR) firing rate shall not exceed a maximum of 1,041 Million British thermal units per hour (MMBtu/hr), determined by fuel flow at the higher heating value of the fuel.

4. The flow of natural gas, PSA off-gas and PSA feed gas or syngas to the SMR shall be measured once per day using a monitoring device that is accurate to ±5 percent and maintained, calibrated, and operated in accordance with the manufacturer's specifications.

The monitoring device shall be calibrated in accordance with the manufacturer's recommendations or at least annually. Maximum annual heat input shall not exceed the following limitations:

EPN	Source Name	MMBtu per Year
SMRSTACK	Combustion Reformer	875 MMBtu/hr x 8760 hr/yr = 7,665,000
FLARE	Process Flare Pilot	4044

5. A selective catalytic reduction (SCR) system using aqueous ammonia shall be installed and operated to meet the nitrogen oxides (NOx) and ammonia (NH3) emission limits of this special condition and the maximum allowable emission rates table (MAERT) EPN SMRSTACK Reformer Combustion Stack Normal Operations. Emissions from the Reformer (EPN SMRSTACK) shall not exceed the following except during periods of maintenance, startup, and shutdown (MSS) which shall not exceed 116 hours per year:

   A. 0.015 pound per Million British thermal units per hour (lb/MMBtu) NO_x, at 3 percent oxygen (O_2) based upon a 24-hour rolling average.

   B. 20 parts per million by volume, dry basis (ppmvd) carbon monoxide (CO), at 3 percent O_2 based upon a 24-hour rolling average.

   C. 10 ppmvd NH_3, at 3 percent O_2 based on a 24-hour rolling average.

6. The Cooling Tower (EPN CT) shall be equipped with drift eliminators that achieve a maximum drift of 0.001 percent.

7. Opacity of particulate matter emissions shall not exceed five percent from EPN SMRSTACK. This determination shall be made by first observing for visible emissions while the facility is operating. Observations shall be made at least 15 feet and no more than 0.25 mile from the emission point(s). If visible emissions are observed from the stack(s), then opacity shall be determined by 40 CFR Part 60, Appendix A, Test Method 9. The opacity observation as determined by 40 CFR Part 60, Appendix A, Test Method 9 may be performed by a third party contractor within 48 hours following the visible emissions observation. Contributions from uncombined water shall not be included in determining compliance with this condition. Observations shall be performed and recorded quarterly. If opacity exceeds five percent, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation. If, within 48 hours of first observing the visible emissions, the corrective action eliminates the source of the visible emissions

such that visible emissions are no longer observed using the visible emissions determination method, then an opacity observation as determined by 40 CFR Part 60, Appendix A, Test Method 9 is not required.

8. Flares shall be designed and operated in accordance with the following requirements:

   A. The flare system shall be designed such that the combined assist natural gas and waste stream to the flare meets 40 CFR § 60.18 specifications of minimum heating value and/or maximum tip velocity under normal, upset and maintenance flow conditions.

      The heating value and /or velocity requirements shall be satisfied during operations authorized by this permit. Flare testing per 40 CFR § 60.18(f) may be requested by the appropriate TCEQ Regional Office to demonstrate compliance with these requirements.

   B. The flare shall be operated with a flame present at all times of the active process stream flaring and have a constant pilot flame. The pilot flame shall be monitored by a thermocouple, an infrared monitor, or a TCEQ-approved equivalent device or method to detect the presence of a flame. The time, date and duration of any loss of flare flame shall be recorded. Each monitoring device shall be accurate to, and shall be calibrated at, a frequency in accordance with the manufacturer's specifications.

   C. The flare shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.

   D. The permit holder shall install a continuous flow monitor, or TCEQ Air Permits Division-approved equivalent that provides a record of the vent stream flow to the flare. The flow monitor sensor sample point should be installed in the vent stream as near as possible to the flare inlet such that the total vent stream to the flare is measured. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour. Records of the hourly averages shall be maintained for five years and be made available to the Executive Director of the TCEQ upon request.

9. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the MAERT. Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions.

Initial Demonstration of Compliance

10. Sampling ports and platform(s) shall be incorporated into the design of the reformer combustion stack (EPN SMRSTACK) according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" of the TCEQ Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

11. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the reformer combustion stack (EPN SMRSTACK). The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

    A. The TCEQ Houston Regional Office shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

        The notice shall include:

        (1) Date for pretest meeting.

        (2) Date sampling will occur.

        (3) Name of firm conducting sampling.

        (4) Type of sampling equipment to be used.

        (5) Method or procedure to be used in sampling.

        (6) Procedure/parameters to be used to determine worst-case emissions during the sampling period. These shall include SMR firing rate.

        The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

        A written proposed description of any deviation from sampling procedures specified in permit conditions or TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Houston Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate or equivalent procedure proposals for New Source Performance Standards (NSPS) testing which must have the EPA approval shall be submitted to the TCEQ Air Permits Division.

B. Air contaminants emitted from the combustion reformer stack to be tested for include (but are not limited to) NO_x, VOC, CO, and NH_3. Emission rates of NO_x, CO, and NH_3 shall be reported in both pound per hour (lb/hr) and ppmvd for compliance testing. **(06/12)**

C. Sampling shall occur within 60 days of achieving the maximum operating rate, but no later than 180 days after initial firing of the unit. Requests for additional time to perform sampling shall be submitted to the TCEQ Houston Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 requires the EPA approval, and requests shall be submitted to the TCEQ Air Permits Division. **(06/12)**

D. The facility being tested shall operate at the maximum firing rate during stack emission testing. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. If the facility is unable to operate at maximum rates during testing, then future production rates may be limited to the rates established during testing.

During subsequent operations, if the hourly average firing rate is more than 10 percent greater than that recorded during the test period, additional stack sampling may be required at the request of the TCEQ at the new operating conditions to demonstrate compliance with the MAERT.

Permit conditions and parameters limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in Special Condition 11A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

E. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the enclosed provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Houston Regional Office.

One copy to the TCEQ Air Permits Division, Combustion and Coatings Section, Austin.

F. Stack sampling shall be repeated as often as required by the Executive Director of the TCEQ after the initial sampling.

G. If the facility is not able to demonstrate compliance with the VOC level on the MAERT through this sampling, and the VOC emissions are greater than the nonattainment major source definition, then a retroactive nonattainment review for this contaminant must be completed.

Continuous Demonstration of Compliance

12. The reformer shall be tested via stack testing if requested by the TCEQ.

13. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x, CO, and O_2 from the Combustion Reformer Stack (EPN SMRSTACK). **(06/12)**

A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met. Compliance with the continuous emissions monitoring requirements of 40 CFR Part 60 above can be demonstrated by meeting the applicable requirements of 40 CFR Part 75 provided that the holder of this permit demonstrates compliance with all applicable NSPS emission standards.

B. The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the relevant Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of ±15 percent accuracy indicate the CEMS is out of control and necessary corrective action shall be taken to eliminate the problem.

C. The monitoring data shall be reduced to hourly average concentrations at least once everyday, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of pounds per hour at least once everyday as follows:

The measured hourly average concentration of CO, NO_x, NH_3, and O_2 from the CEMS shall be multiplied by the exhaust gas flow rate as determined using flow meter to determine the hourly emission rates. Readings shall be taken at least once every 15 minutes and the average hourly values of the flow shall be recorded each hour. The flow monitor shall be calibrated on an annual basis and be accurate to ±5 percent.

D. The monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or designated representative upon request. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. The TCEQ Houston Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

F. Quality-assured (or valid) data shall be generated when the combustion reformer is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the combustion reformer is operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

14. The NH_3 concentration in the Combustion Reformer Stack (EPN SMRSTACK) shall be tested or calculated according to the following method. Testing for NH_3 slip is only required on days when the SCR unit is in operation. **(06/12)**

A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH_3. The NH_3 concentrations shall be corrected and reported in accordance with Special Condition No. 5C.

B. Any other method used for measuring NH_3 slip shall require prior approval from the TCEQ Office of Air, Air Permits Division.

Chemical Storage

15. This permit allows for the construction of one 9,000-gallon aqueous ammonia storage tank. Storage of aqueous ammonia on-site is limited to this tank only unless authorization is obtained for more tanks. The ammonia shall not exceed 29 percent NH_3 by weight.

16. The permit holder shall maintain prevention and protection measures for the NH_3 storage system which includes marking and securing the storage tank so as to protect the NH_3 storage tank from accidents that could cause a rupture.

17. The permit holder shall maintain the piping and valves in NH_3 service as follows:

    A. Audio, olfactory, and visual checks for NH_3 leaks within the operating area shall be made once per day.

    B. As soon as practicable, following the detection of a leak, plant personnel shall take one or more of the following actions:

        (1) Locate and isolate the leak, if necessary.

        (2) Commence repair or replacement of the leaking component.

        (3) Use a leak collection or containment system to control the leak until repair or replacement can be made if immediate repair is not possible.

18. All outdoor storage tanks shall have uninsulated exterior surface areas that are exposed to the sun be colored white or be aluminum.

19. All storage tanks shall be equipped with a submerged fill pipe.

Maintenance, Startup, and Shutdown

20. This permit authorizes MSS emissions from the following emissions sources and EPNs:

    A. Reformer Combustion Stack (EPN SMRSTACK)

    B. Process Flare (EPN FLARE)

    C. Process Steam Deaerator Vent (EPN DAVENT2)

    D. Blowdown Vent (EPN BDVENT)

E. Export Steam Vent (EPN STMVENT1)

F. Process Steam Vent (EPN STMVENT2)

A description of the potential MSS activities is referenced in Section 9.8 of the confidential portion of the February 2009 permit application. These emissions are subject to the maximum allowable emission rates indicated on the MAERT and the visible emissions requirements in Special Condition No. 7. The MSS emissions are not required to comply with the concentration limits stated in Special Condition No. 5. Any MSS activities not referenced in this special condition are not authorized by this permit.

Nonattainment New Source Review (NNSR) - Emission Reductions

21. The permit holder shall provide total offsets in the amount of 49.2 tons per year (TPY) of NO_x, based on 37.8 TPY of NO_x, authorized and an offset ratio of 1.3:1, prior to the start of operation of the equipment authorized under this permit.

The permittee will satisfy the 1:1 portion of the offset through participation in the Mass Emission Cap and Trade (MECT) Program and the 0.3 portion shall either be emission reduction credits (ERCs), discrete emission reduction credits (DERC)s, or obtained from MECT. If the permittee chooses to use MECT allowances for the 0.3 portion of the offset, the MECT allowances shall be permanently retired prior to start of operation of the source.

For the 1:1 portion of the offset, at the beginning of the MECT compliance period in which a source will commence operation and at the beginning of each MECT compliance period after that, the permittee must have sufficient MECT allowances to cover the potential to emit of that source.

Recordkeeping

22. The following records, written or electronic, shall be maintained at the plant site on a five-year rolling basis and be made readily available at the request of personnel from the TCEQ or any air pollution control agency with jurisdiction:

A. For the combustion reformer:

(1) Average hourly NO_x emissions in lb/hr.

(2) Average NO_x concentration in ppmvd at 3 percent O_2 based on a 24-hour rolling average.

(3) Average hourly actual CO emissions in lb/hr.

(4) Average CO concentration in ppmvd at 3 percent O_2 based on a 24-hour rolling average.

(5) Average hourly NH_3 emissions in lb/hr.

(6) Average NH_3 concentration in ppmvd at 3 percent O_2 based on a 24-hour rolling average.

B. Raw data file of all CEMS measurements, including CEMS performance testing measurements, and all CEMS calibration checks and adjustments and maintenance performed on these systems in a permanent form suitable for inspection.

C. Records of the manufacturer's specification that show the cooling tower's drift eliminators are designed to limit drift as specified in Special Condition No. 6.

D. Average hourly flow rates to the flare as specified in Special Condition No. 8D.

E. Records of the manufacturer's specifications for operating equipment employed by the facility.

F. Records of visible emission observations and opacity measurements, if applicable, as specified in Special Condition No. 7

G. Completed test reports from TCEQ required compliance testing. These test reports shall be retained on-site for the life of the equipment.

H. Records of fuel sampling conducted pursuant to Special Condition No. 2.

I. Records of natural gas and PSA off-gas usage and the sulfur content according to the fuel suppliers for the reformer to show compliance with Special Condition Nos. 2 and 4.

J. Records of inspections and repairs as specified in Special Condition No. 17A and 17B.

Dated June 25, 2012

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Numbers 87575 and N116

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	Emission Rates * TPY**
SMRSTACK	Reformer Combustion Stack Normal Operations	NO_x	26.03	24.70
		CO	16.55	60.42
		VOC	2.50	9.12
		$PM_{2.5}$	7.81	28.50
		SO_2	0.84	1.85
		NH_3	5.04	18.39
SMRSTACK	Reformer Combustion Stack MSS Activities	NO_x	152.09	8.55
		CO	118.09	6.83
		VOC	---	---
		$PM_{2.5}$	---	---
		SO_2	---	---
		NH_3	10.64	0.59
FLARE	Process Flare Normal Operations	NO_x	64.93	1.09
		CO	0.13	0.56
		SO_2	<0.01	<0.01
		VOC	0.01	0.04
		NH_3	0.49	<0.01
FLARE	Process Flare MSS Activities	NO_x	95.13	3.40
		CO	532.21	12.62
		SO_2	0.62	<0.01
		VOC	6.98	0.02
		NH_3	---	---
DAVENT1	Export Steam Deaerator Vent Normal Operations	VOC	0.04	0.16
		NH_3	0.01	0.03

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates * lb/hr	Emission Rates * TPY**
DAVENT2	Process Steam Deaerator Vent MSS Activities	VOC	4.86	0.35
		NH_3	0.26	0.02
BDVENT	Steam System Blowdown Vent Normal Operations	VOC	9.00	2.59
		NH_3	0.01	<0.01
BDVENT	Steam System Blowdown Vent MSS Activities	VOC	1.62	0.07
		NH_3	<0.01	<0.01
CT	Cooling Tower	VOC	0.01	0.07
		PM_{10}	0.44	1.93
FUG	Process Fugitive Emissions (4)	CO	1.62	7.11
		VOC	0.56	2.48
NH_3FUG	Ammonia System Fugitive Emissions	NH_3	0.53	1.37
GLYCOLTNK	Glycol Storage Tank	VOC	<0.01	<0.01
BDSUMP	Steam System Blowdown Sump Normal Operations	VOC	0.46	2.03
		NH_3	0.05	0.23
STMVNT1	Export Steam Vent MSS Activities	VOC	0.92	0.14
		NH_3	0.17	0.02
STMVNT2	Process Steam Vent MSS Activities	VOC	0.40	0.03
		NH_3	0.08	0.01

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
(3) NO_x - total oxides of nitrogen
CO - carbon monoxide
VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
PM - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$
PM_{10} - particulate matter equal to or less than 10 microns in diameter. When PM is not listed, it is assumed that no PM greater than 10 microns is emitted.
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
SO_2 - sulfur dioxide
NH_3 - ammonia
(4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year or 8,760 Hrs/year

** Compliance with annual emission limits is based on a rolling 12-month period.

Dated February 19, 2010